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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/606,734	06/29/2000	David L. Black	07072-113001	6696
45456	7590	08/08/2005	EXAMINER	
RICHARD M. SHARKANSKY PO BOX 557 MASHPEE, MA 02649			NGUYEN, THAN VINH	
			ART UNIT	PAPER NUMBER
			2187	

DATE MAILED: 08/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/606,734	Applicant(s) BLACK ET AL.	
	Examiner Than Nguyen	Art Unit 2187	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2,3,5,6,8-10 and 16-18 is/are allowed.
- 6) ☒ Claim(s) 1,4,7,11-15,19-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 June 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>1/4/05, 4/20/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3/10/05 has been entered.
2. This is a response to the amendment, filed 3/10/05.
3. Claims 1-22 are presented for examination.
4. Applicant's arguments with respect to claims 1,4,7,11-14,15,19-22 have been considered but are moot in view of the new ground(s) of rejection.

Information Disclosure Statement

5. The information disclosure statements filed 1/4/05 and 4/20/05 has been considered

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1,4 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The examiner cannot find support for the added limitations of passing message through the message network with such

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passing messages bypassing the cache memory”. Applicant must point out where the specification has support of this limitation. For future references, Applicant should indicate the location of support, in the specification, for newly added claim limitations.

8. Claims 1,4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

9. As to claims 1,4 it is unclear as what is being claim with the following language “passing message through the message network with such passing messages **bypassing the cache memory**”. It is unclear as to the function of the bypassing limitation. Is the data not stored in the cache or the transfer of data is not through the cache? Applicant must point out where the specification has support of this limitation.

10. Claims 7,11-14,15,19-22 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. As to claim 7/15 (line 2), it is unclear what “a bank of” means. Does Applicant mean a bank of disk drives? Claims 10,12-14,19-22 are rejected for the same reason.

Claim Rejections - 35 USC § 102

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this

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subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

12. Claims 1,4 are rejected under 35 U.S.C. 102(e) as being anticipated by Chung et al (USP 6,470,389).

As to claim 1,4:

13. Chung teaches a method for transferring data between a host computer and a bank of disk drives through a system interface, such system interface comprising: a plurality of first directors coupled to the host computer; a plurality of second directors coupled to the bank of disk drives; a data transfer section having a cache memory coupled to the plurality of first directors and second directors; and a messaging network coupled to the plurality of first directors and second directors, such method comprising:

passing messages through the message network with such passing message bypassing the cache memory (transfer messages/packets on network, the messages do not pass through any cache; 1/58-2/14);

operating the first and second directors to control data transfer between the host computer and the bank of disk drives in response to the messages passing between the directors through the messaging network as such data passes through the data transfer section (accessing information on servers across network; Fig. 1; 1/40-57), such message passing comprising:

preparing, in one of the directors, a message to be sent to a receiving director(s) (generate packet; 5/59-62);

building a descriptor comprising a command field indicating the receiving director(s) to receive the message (destination address; 2/18);

encapsulating the message payload of the descriptor into a packet, such message/comprising:

a header, such header including: a source portion indicating the transmitting director; a destination portion indicating the receiving director (header of packet; 2/1-3/58);

the message payload (the request; 2/1-67);

transmitting the packet to the director(s) through the network (send packet over network/ 1/57-2/50);

decoding the destination portion of the packet to route the packet to the receiving director (route packet to destination 7/39-8/15).

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claims 7,15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chung et al (USP 6,470,389) in view of Ethridge et al (US 6,466,572).

As to claim 7,15:

16. Chung teaches a method for transferring data between a host computer and a bank of disk drives through a system interface, such system interface comprising: a plurality of directors coupled to the host computer; a plurality of second directors coupled to the bank of disk drives; a data transfer section coupled to the plurality of first directors and second directors; and a messaging network coupled to the plurality of first directors and the plurality of second directors,

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such first and second directors controlling data transfer between the host computer and the bank of disk drives in response to messages passing between the directors through the messaging network as such data passes through the data transfer section, such method comprising:

determining, in a transmitting of the directors, that action is requested by receiving the director(s) (client request; abstract);

preparing a message to be sent to the director(s) (generate packet; 5/59-62);

building a descriptor comprising a command field indicating the director(s) to receive the built message and storing the built descriptor in a memory within the transmitting of the directors(destination address; 2/18);

retrieving the stored descriptor in such transmitting one of the directors (provide address; 2/18-25);

encapsulating the message payload of the retrieved descriptor into a MAC type packet, such packet comprising:

a header, such header including: a source portion indicating the transmitting director; a destination portion indicating the receiving director (header of packet; 2/1-3/58);

the message payload (the request; 2/1-67);

transmitting the packet to the director(s) through the network (send packet over network/ 1/57-2/50);

decoding the destination portion of the packet to route the packet to the receiving director (route packet to destination7/39-8/15).

Chung does not specifically teach incrementing a pointer or counter in the transmitting directors each time a descriptor is ready to be retrieved from the memory and decrement the

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pointer or counter when the descriptor is retrieved from the memory. It is common in the art to use a counter to keep track of data packets sent and received. Ethridge teaches incrementing a counter when a packet is received and decrementing the counter when the packet frame is transmitted to keep track of the packets (18/18-23, 23/61-62, 24/20-24). It would have been obvious to one of ordinary skills to use Ethridge's teachings, in the invention of Chung, to teach incrementing a pointer or counter in the transmitting directors each time a descriptor is ready to be retrieved from the memory and decrement the pointer or counter when the descriptor is retrieved from the memory to track the descriptors/packets.

Allowable Subject Matter

17. Claims 2,3,5,6,8,9,10,16-18 are allowed for reasons indicated in the previous office action.

18. Claim 11-14, 19-22 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims. These claims are allowable for reasons indicated in the last office action.


Conclusion

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Than Nguyen whose telephone number is 703-305-3866. The examiner can normally be reached on 8am-3pm M-F.

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20. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Sparks can be reached on 308-1756. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

21. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Than Nguyen
Examiner
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